# This Page Is Inserted by IFW Operations and is not a part of the Official Record

## BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- · ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

## IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.



- 2. (Twice amended) An electrically controlled braking system according to claim 5, wherein said electrically controlled brake includes a rotor for rotating with said wheel, a friction member, and an electric motor for forcing said friction member onto said rotor, and said brake control apparatus includes a motor control device for controlling the electric energy to be supplied from said electric power source device to said electric motor.
- 3. (Twice amended) An electrically controlled braking system according to claim 5, wherein said electrically controlled brake includes a rotor for rotating with said wheel, a friction member, and an electrically operated actuator for forcing said friction member on to said rotor, said switching device is disposed between said electric power source device and said actuator.
- 4. (Twice amended) An electrically controlled braking system according to claim 5, wherein said electrically controlled brakes includes a rotor for rotating with said wheel, a friction member, and an electrically operated actuator for forcing said friction member onto said rotor, said braking system further comprising another switching device disposed between said electric power source device and said actuator, said another switching device being turned on to connect said electric power source device to said actuator in response to an operation of said brake operating member.
- 5. (Twice amended) An electrically controlled braking system including an electrically controlled brake for braking a wheel of an automotive vehicle, an electric power source device, a brake operating member, and a brake control apparatus for controlling an electric energy to be supplied from said electric power source device to said brake, for thereby controlling an operation of said brake, when said brake operating member is operated, said braking system comprising:

a switching device disposed between said electric power source device, and at least one of said brake control apparatus and said brake, said switching device being turned on for connecting said electric power source device to said at least one of said brake control apparatus and said brake in response to an operation of said brake operating member, wherein said switching device

(actuation of Godon un combo wy getting up grom seat or opening 6007)

(18 un series W/24126)

bl cont which are turned on commonly in response to the operation of said brake operating member.

- 6. (Amended) An electrically controlled braking system according to claim 5, wherein said brake control apparatus includes a plurality of control devices each of which is principally constituted by a computer, and said electric power source device includes a plurality of electric power sources corresponding to said plurality of control devices, respectively.
- 11. (Amended) An electrically controlled braking system according to slaim 5, wherein said brake control apparatus includes at least three control devices each of which is principally constituted by a computer.
- including an electrically controlled brake for braking a wheel of an automotive vehicle, an electric power source device, a brake operating member, and a brake control apparatus for controlling an electric energy to be supplied from said electric power source device to said brake, for thereby controlling an operation of said brake, when said brake operating member is operated, said braking system comprising:

a switching device disposed between said electric power source device and at least one of said brake control apparatus and said brake, said switching device being turned on for connecting said electric power source device to said at least one of said brake control apparatus and said brake, in response to an operation of said brake operating member,

wherein said electrically controlled brake includes a front brake for braking a front wheel and a rear brake for braking a rear wheel, and said brake control apparatus includes a front brake control device for controlling an operation of said front brake and a rear brake control device for controlling said rear brake, said electric power source device includes a plurality of electric power sources which are arranged to supply electric energies to said front brake control device independently of each other.

hylo /

64

15. (Twice amended) An electrically controlled braking system including an electrically controlled brake for braking a wheel of an automotive vehicle, an electric power source device, a brake operating member, and a brake control apparatus for controlling an electric energy to be supplied from said electric power source device to said brake, for thereby controlling an operation of said brake, when said brake operating member is operated, said braking system comprising:

a switching device disposed between said electric power source device, and at least one of said brake control apparatus and said brake, said switching device being turned on for connecting said electric power source device to said at least one of said brake control apparatus and said brake, in response to an operation of said brake operating member,

wherein said electrically controlled brake includes a front left brake for braking a front left wheel, a front right brake for braking a front right wheel, a rear left brake for braking a rear left wheel and a rear right brake for braking a rear right wheel, and said brake control apparatus includes a front left brake control device for controlling said front left brake, a front right brake control device for controlling said front right brake, a rear left brake control device for controlling said rear left brake and a rear right brake control device for controlling said rear right brake, said electric power source device including a front left brake power source and a front right brake power source which are arranged to supply electric energies to said front left and right brake control devices, respectively, independently of each other, and a common rear brake power source arranged to supply an electric energy to both of said rear left and right brake control devices.

16. (Twice amended) An electrically controlled braking system including an electrically controlled brake for braking a wheel of an automotive vehicle, an electric power source device, a brake operating member, and a brake control apparatus for controlling an electric energy to be supplied from said electric power source device to said brake, for thereby controlling an operation of

d 2 cont said brake, when said brake operating member is operated, said braking system comprising:

a switching device disposed between said electric power source device, and at least one of said brake control apparatus and said brake, said switching device being turned on for connecting said electric power source device to said at least one of said brake control apparatus and said brake, in response to an operation of said brake operating member,

wherein said electrically controlled brake includes front rotor rotating with a front wheel, a front friction member, and an electrically operated front brake actuator for forcing said front friction member onto said front rotor, and said electric power source device includes a plurality of electric power sources arranged to supply electric energies to said front brake actuator independently of each other.

Pro Cri

- 18. (Twice amended) An electrically controlled braking system according to claim 5, wherein said electrically controlled brake includes an electrically operated front brake actuator for forcing a friction member onto a rotor rotating with a front wheel and an electrically operated rear brake actuator for forcing a friction member onto a rotor rotating with a rear wheel, and said electric power source device includes a front brake power source for supplying an electric energy to said electrically operated front brake actuator and a rear brake power source for supplying an electric energy to said electrically operated rear brake actuator.
- 19. (Twice amended) An electrically controlled braking system according to claim 5, wherein said electrically controlled brake includes a plurality of brakes for braking respective wheels of the automotive vehicle, said brakes including respective electrically operated electric motors each of which is arranged to force a friction member onto a rotor for rotating with a corresponding one of the wheels, said braking system further comprising a plurality of actuator switching device each of which is disposed between said electric power source device and a corresponding one of said electric motors, each of said actuator switching devices being operable between a connecting state for connecting said

bes

electric power source device to the corresponding electric motor, and a disconnecting state for disconnecting said electric power source device from said corresponding electric motor.

20. (Twice amended) An electrically controlled braking system including an electrically controlled brake for braking a wheel of an automotive vehicle, an electric power source device, a brake operating member, and a brake control apparatus for controlling an electric energy to be supplied from said electric power source device to said brake, for thereby controlling an operation of said brake, when said brake operating member is operated, said braking system comprising:

a switching device disposed between said electric power source device, and at least one of said brake control apparatus and said brake, said switching device being turned on for connecting said electric power source device to said at least one of said brake control apparatus and said brake, in response to an operation of said brake operating member,

wherein said electrically controlled brake includes a plurality of brakes for braking respective wheels of the automotive vehicle, said brakes including respective electrically operated electric motors each of which is arranged to force a friction member onto a rotor rotating with a corresponding one of the wheels, said braking system further comprising a plurality of actuator switching devices each of which is disposed between said electric power source device and a corresponding one of said electric motors, each of said actuator switching devices being operable between a connecting state for connecting said electric power source device to the corresponding electric motor, and a disconnecting state for disconnecting said electric power source device from said corresponding electric motor,

and wherein said brake control apparatus includes motor control devices for controlling said electric motors, respectively, and each of said plurality of actuator switching devices includes two switches connected in series with each other, one of said two switches of said each of said actuator switching devices being turned off when the corresponding electric motor becomes abnormal, the

other of said two switches being turned off when the corresponding motor control device becomes abnormal.

July Control

21. (Twice amended) An electrically controlled braking system according to claim 5, wherein said electrically controlled brake includes a rotor for rotating with said wheel, a friction member, and an electrically operated actuator for forcing said friction member onto said rotor, and said brake control apparatus includes a main control device which determines a physical quantity relating to a desired value of a braking force to be produced by said brake and generates a control command representative of the determined physical quantity, and an actuator control device which controls said electrically operated actuator according to said control command and generates a signal representative of a physical quantity relating to an actual value of the braking force produced by said brake.

64

24. (Twice amended) An electrically controlled braking system including an electrically controlled brake for braking a wheel of an automotive vehicle, an electric power source device, a brake operating member, and a brake control apparatus for controlling an electric energy to be supplied from said electric power source device to said brake, for thereby controlling an operation of said brake, when said brake operating member is operated, said braking system comprising:

a switching device disposed between said electric power source device and at least one of said brake control apparatus and said brake, said switching device being turned on for connecting said electric power source device to said at least one of said brake control apparatus and said brake, in response to an operation of said brake operating member,

wherein said electrically controlled brake includes a rotor rotating with said wheel, a friction member, and an electrically operated actuator for forcing said friction member onto said rotor, said braking system comprising an electric circuit in which said actuator and said brake control apparatus are connected to said electric power device such that said actuator and said brake control apparatus are connected in parallel with each other, and wherein said switching device is

69 Cont disposed in a common portion of said electric circuit which serves to connect said electric power source device to both of said actuator and said brake control apparatus.

500 Subs

(Amended) An electrically controlled brake system according to claim 5, further including a mechanically operated brake mechanically operated by said brake operating member, and wherein said brake control apparatus includes a switching mechanism operable between a connecting state in which an operating force applied to said brake operating member upon operation of said brake operating member is transmitted to said mechanically operated brake and a disconnecting state in which said operating force is not transmitted to said mechanically operated brake, said brake control apparatus further including a switching control device which is normally placed in said disconnecting state, and is brought into said connecting state when an electrical abnormality of the electrically braking system takes place.

### Kindly add the following new claims:

**b4** 

- 33. (New) An electrically controlled braking system according to claim5, wherein said brake operating member is a brake pedal.
- 34. (New) An electrically controlled braking system according to claim 13, wherein said electrically controlled brake includes a rotor for rotating with said wheel, a friction member, and an electric motor for forcing said friction member onto said rotor, and said brake control apparatus includes a motor control device for controlling the electric energy to be supplied from said electric power source device to said electric motor.
- 35. (New) An electrically controlled braking system according to claim 15, wherein said electrically controlled brake includes a rotor for rotating with said wheel, a friction member, and an electric motor for forcing said friction member onto said rotor, and said brake control apparatus includes a motor control device for controlling the electric energy to be supplied from said electric power source device to said electric motor.



- 36. (New) An electrically controlled braking system according to claim 16, wherein said electrically controlled brake includes a rotor for rotating with said wheel, a friction member, and an electric motor for forcing said friction member onto said rotor, and said brake control apparatus includes a motor control device for controlling the electric energy to be supplied from said electric power source device to said electric motor.
- 37. (New) An electrically controlled braking system according to claim 20, wherein said electrically controlled brake includes a rotor for rotating with said wheel, a friction member, and an electric motor for forcing said friction member onto said rotor, and said brake control apparatus includes a motor control device for controlling the electric energy to be supplied from said electric power source device to said electric motor.
- 38. (New) An electrically controlled braking system according to claim 24, wherein said electrically controlled brake includes a rotor for rotating with said wheel, a friction member, and an electric motor for forcing said friction member onto said rotor, and said brake control apparatus includes a motor control device for controlling the electric energy to be supplied from said electric power source device to said electric motor.

#### Remarks 8 1

Claims 2-29 and 32-38 are pending in the application. Claim 20 has been allowed. Claims 1, 30 and 31 have been canceled. Claims 33-38 are newly added. Claims 1-13, 15-19, 21-24 and 29-32 have been rejected. Claims 14 and 24-28 have been objected to. Favorable reconsideration is respectfully requested.

Claim 15 was objected to as containing a minor informality ("tto" in line 4). Withdrawal of this objection is respectfully requested in view of the amendment to claim 15 set forth above.